



The Cabinet Mountains Grizzly Bear Augmentation Program

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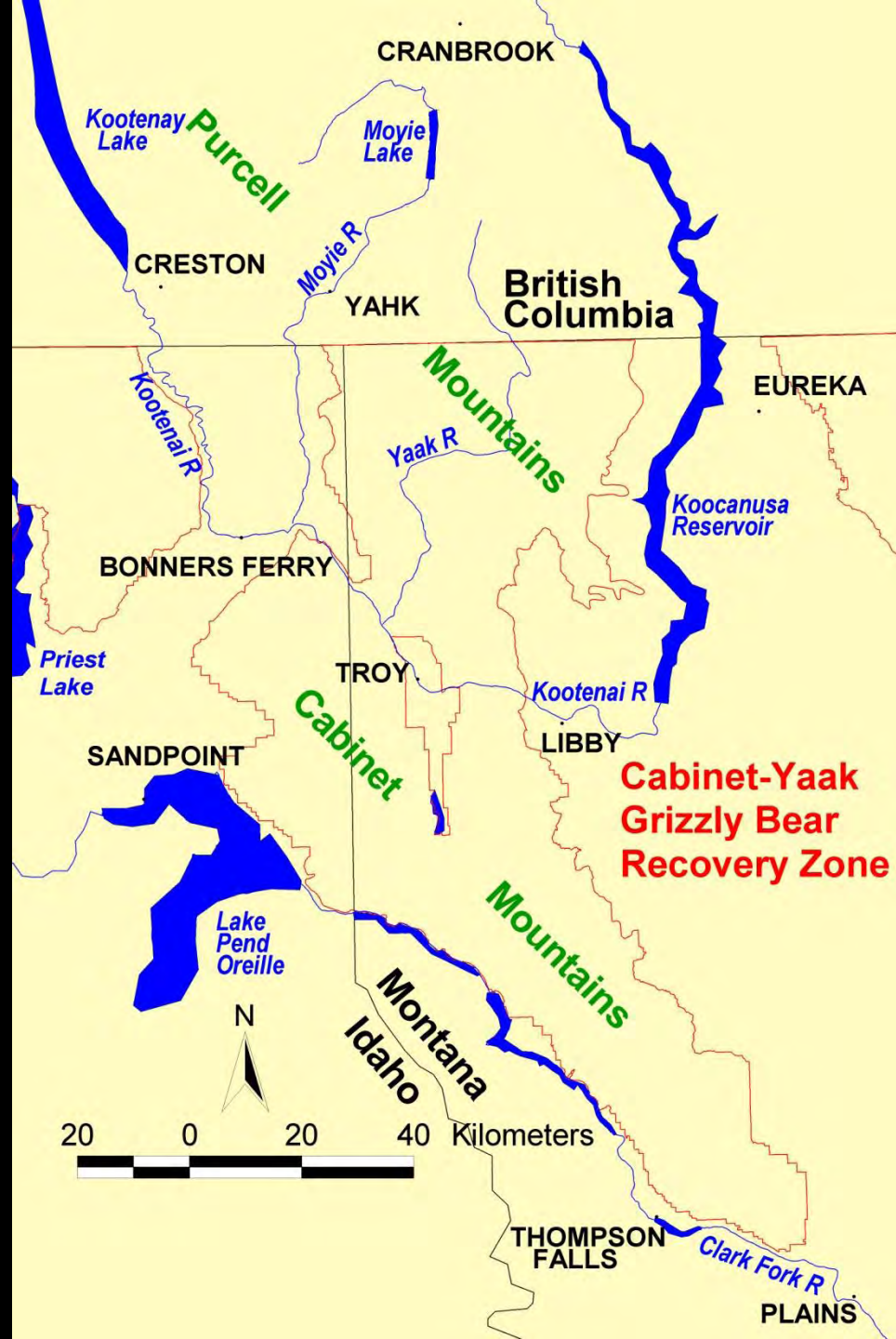
Outline



- Background and need for Cabinet Mountains population augmentation
- Test of population augmentation goals and trials
- Recent additional augmentation efforts
- Measures of augmentation success

Cabinet-Yaak Grizzly Bear Recovery Zone

- Northwest MT and northern ID
- 6750 sq km
- Contiguous with BC grizzly populations





Cabinet Mountains Management Conclusions and Recommendations (Kasworm and Manley 1988)



- Population may be < 15 individuals
- Little observed reproduction
- High mortality rates
- No observed linkage to other populations
- Recommend population augmentation, mortality reduction, increased habitat security

Augmentation Bear Criteria



- Bears will be independent females
- Bears must have no history of human conflicts
- Bears will be backcountry animals
- Bears will be moved in mid-summer

Success Criteria for Test of Augmentation

- TRANSPLANTS
MUST STAY
WITHIN THE
TARGET AREA FOR
AT LEAST ONE YEAR
- TRANSPLANTS
SHOULD
ULTIMATELY
REPRODUCE WITH
NATIVE MALES





1990-94 and 2005-11 Augmentation

- First 4 bears captured in North Fork Flathead, BC 1990-94
- Last 9 bears from the Flathead drainage in US 2005-11
- 11 Females aged 2-10, 2 Males aged 2-4
- Bears released June 20 - Oct 1

Cabinet Mountains Population Augmentation

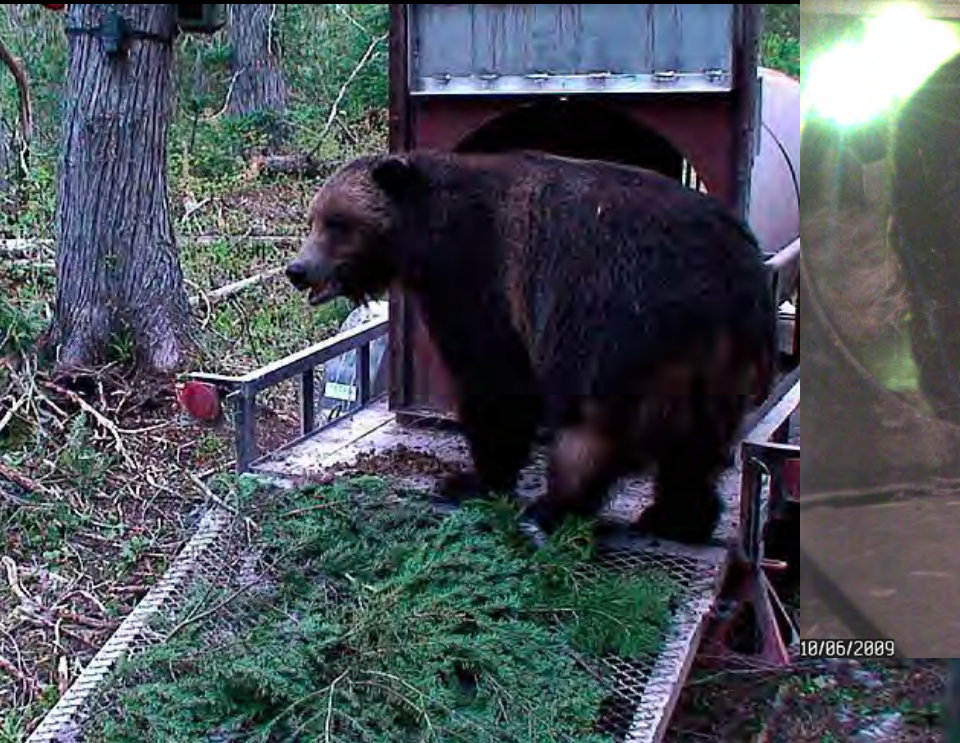
- Bears captured by culvert trap or leg hold snare
- Transport and release within 1-2 days of capture
- Use GPS radio collars



Efforts to Reduce Non-target Captures

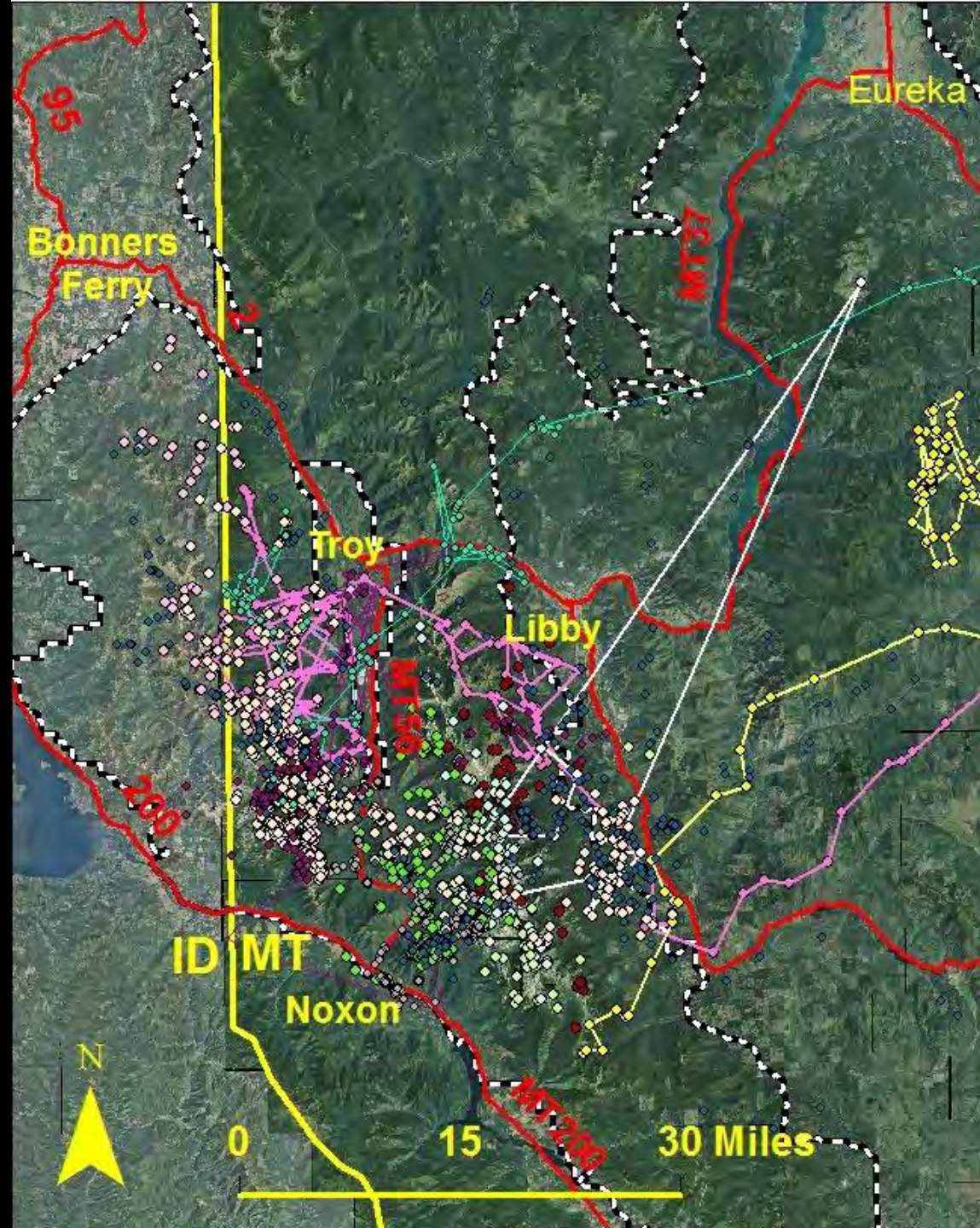


- Video at trap sites prior to activation
- Remote release trap with web camera



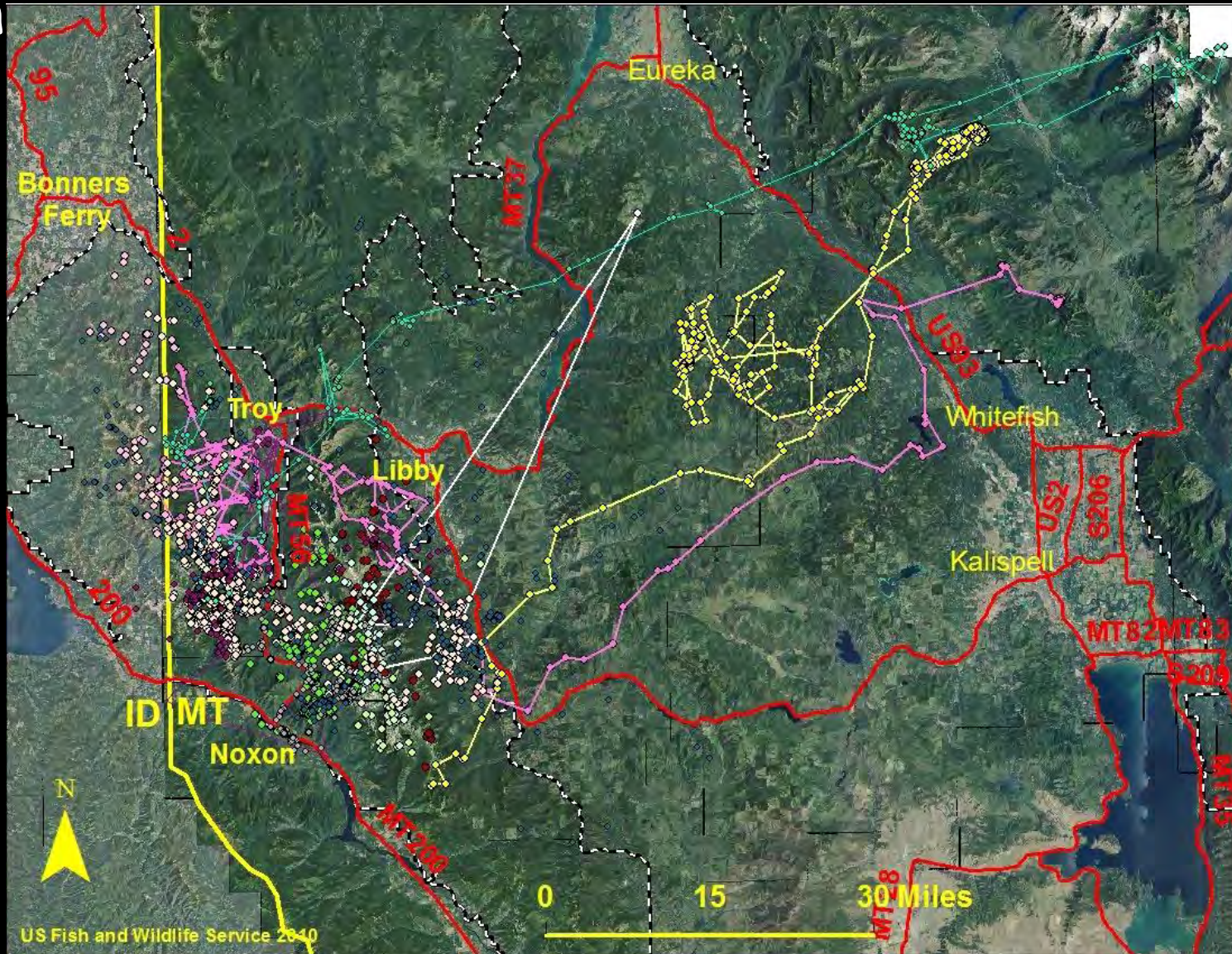
RESULTS

- 7 of 11 female bears remained in the target area for at least 1 year
- 4 bears left target area, but one was captured and returned
- Two males moved one bear remaining with a radio collar



Unsuccessfuls

- 4 bears left area in < 1 year
- One was recaptured and released
- 3 bears that left wore GPS collars
- Returns were rapid (4-6 days) and highly directional



RESULTS

- 3 of 13 bears known to have died while collared (natural, illegal kill, train kill)
- One bear did produce a cub but died of natural causes soon after
- The cub was not fathered by a native Cabinet Mountains male

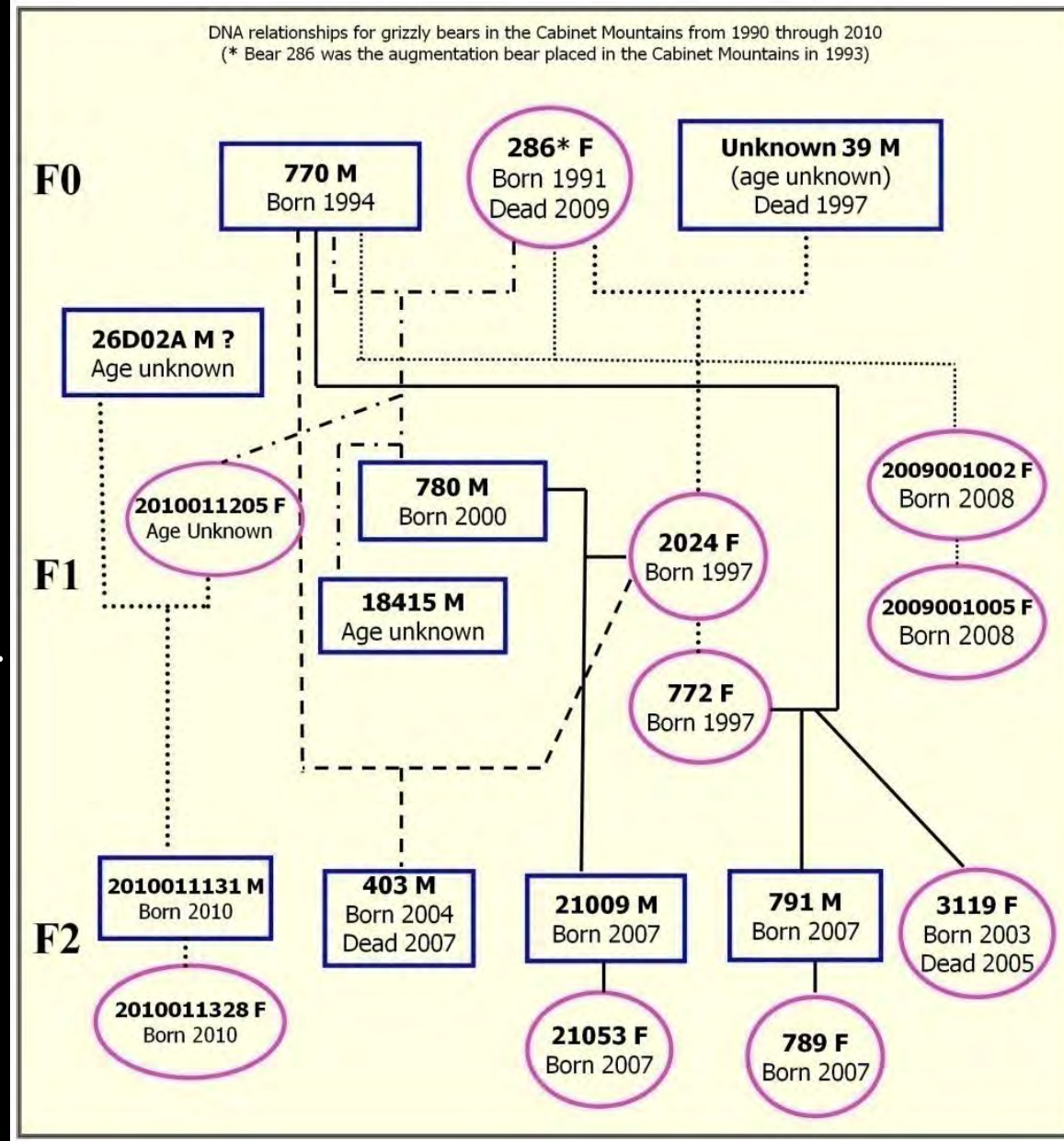


HAIR SNAGGING FOR GENETIC ANALYSIS



Augmentation Monitoring by Genetics

- 13 bears transplanted to Cabinet Mountains 1990-2011 (11 F & 2 M)
- At least one bear (286) has produced at least 8 offspring and her offspring have reproduced. 286 was killed in 2009 (Self Defense)
- Few original native males identified and a male was added in 2010 and 2011



Population Analysis

Captures, hair snags distinguished as individuals 2000-2010. Probably not all bears that exist, but all may not still be alive

- 28 individual bears identified
- 18 of 28 related to 286
- 5 other augmentation
- 5 unrelated (1 ADM, 1 family)
- 7 known to be dead
- Total population prior to augmentation may have been much less than 15 bears
- Cabinet Mountains population may have disappeared without augmentation



Augmentation Summary

- 13 bears transplanted to Cabinet Mountains 1990-2011 (11 Females, 2 Males)
- Four bears left the target area after release, but one was recaptured and returned
- 4 bears known to have died (Natural, Illegal kill, Train, Self Defense)
- At least one bear has reproduced and her offspring have reproduced



Augmentation Lessons

- Younger bears more adaptable? (4 of 11 < 7 years old left, 1 of 2 > 7 years old left)
- More distance between capture and release? (2 of 4 moved < 125 km left, 2 of 9 moved > 125 km left)
- Don't expect 100% success



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Questions?